

**Amendment and Response**

Applicant: Darrel R. Bloomquist et al.

Serial No.: 10/080,847

Filed: Feb. 2, 2002

Docket No.: 10013884-1

Title: IN-PLANE TOROIDAL MEMORY CELL WITH VERTICALLY STEPPED CONDUCTOR

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**REMARKS**

The following remarks are made in response to the Office Action mailed October 6, 2004, in which claims 1-10, 15 and 16 were rejected, and claims 11-14 were objected to. Claims 17-20 have been previously withdrawn from consideration. With this Response, claims 1, 9 and 12-15 have been amended, and claims 8 and 11 have been canceled. Claims 1-7, 9, 10 and 12-16 are presented for reconsideration and allowance.

**Claim Objections**

Claim 15 has been objected to because of an alleged informalities. In particular, the Examiner has requested in claim 15, at line 3, that "directions" should be amended to read -- direction--.

Claim 15 has been amended as suggested by the Examiner, and withdrawal of the objection is respectfully requested.

**Claim Rejections under 35 U.S.C. § 102**

Claim 1-10, 15 and 16 stand rejected under 35 U.S.C. §102(b) as being anticipated by Pryor (U.S. Patent No. 4,328,564).

As to claims 1, 2, 9, 10, 15 and 16, Pryor is alleged to disclose a magnetic memory device (FIG. 2) comprising a toroid-like memory cell 26 having an axial opening aligned with a first axis (X0, . . . , X3), a first conductor X0 and a second conductor Y0, where X0 is orthogonal with Y0. As to claims 3-8, the Examiner acknowledges that Pryor is silent as to the elements of those claims, but alleges that Pryor inherently discloses the claimed elements "since those limitations are conventional" of how a magnetic memory cell is constructed and works.

Independent claim 1 has been amended to include the elements of claim 8, and claim 8 has been canceled from the application. Amended claim 1 now sets forth, in part, **"the first and second conductors each have a stepped portion which is aligned with the first axis as they pass through the axial opening of the memory cell."**

The quoted claim language originated in now canceled claim 8. As noted above, the Examiner has acknowledged that Pryor is silent as to the elements of that claim, but alleges the

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elements are inherently disclosed in the reference. However, despite the Examiner's assertion to the contrary, at least the claim element "the first and second conductors each have a stepped portion which is aligned with the first axis as they pass through the axial opening of the memory cell" is **not** inherently disclosed by Pryor. In fact, **Figure 2 of Pryor illustrates the each of the conductors passing through magnetic toroids 26 as being straight, i.e., without a "stepped portion".** Thus, at least **"the first and second conductors each have a stepped portion which is aligned with the first axis as they pass through the axial opening of the memory cell" is not necessarily present in Pryor.** Accordingly, Pryor does not inherently anticipate the elements of amended independent claim 1, and withdrawal of the rejection of claim 1 under 35 U.S.C. §102(b) is respectfully requested.

Claims 2-7 depend, either directly or indirectly, from amended independent claim 1. For at least the reasons set forth above, claim 1 is in allowable condition. Accordingly, for at least the same reasons, dependent claims 2-7 are also allowable, and withdrawal of the rejection of those claims under 35 U.S.C. §102(b) is respectfully requested.

Independent claim 9 has been amended to include the elements of claim 11 (now canceled), which depended directly therefrom. As claim 11 was indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, claim 9 is now in allowable condition. Accordingly, withdrawal of the rejection of claim 9 under 35 U.S.C. §102(b) is respectfully requested.

Claims 10, 15 and 16 depend, either directly or indirectly, from amended independent claim 9. For at least the reasons set forth above, claim 9 is in allowable condition. Accordingly, for at least the same reasons, dependent claims 10, 15 and 16 are also allowable, and withdrawal of the rejection of those claims under 35 U.S.C. §102(b) is respectfully requested.

**Allowable Subject Matter**

Claims 11-14 have been objected to as being dependent upon a rejected base claim, but are indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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As noted above, claim 11 has been rewritten in independent form by incorporating the elements of claim 11 into independent claim 9. Claims 12-14 have been amended to change their dependency from claim 11 to claim 9. Accordingly, claims 9 and 12-14 are also now in allowable condition.

**CONCLUSION**

In view of the above, Applicant respectfully submits that pending claims 1-7, 9, 10 and 12-16 are in form for allowance.

No fees are required under 37 C.F.R. 1.16(b)(c). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 08-2025.

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The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application. Any inquiry regarding this Amendment and Response should be directed to either Phil Lyren at Telephone No. (281) 514-8236, Facsimile No. (281) 514-8332 or Patrick G. Billig at Telephone No. (612) 573-2003 Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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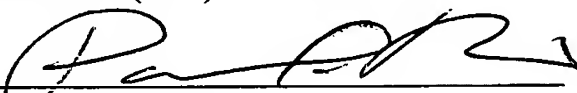
Respectfully submitted,

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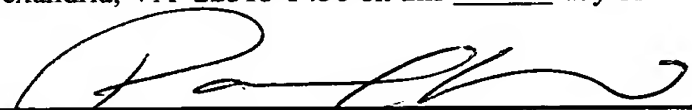
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**CERTIFICATE UNDER 37 C.F.R. 1.8:** The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 21 day of December, 2004.

By   
Name: Patrick G. Billig